

IN THE CLAIMS

Please amend the claims as follows:

1.-12. (Canceled)

13. (Currently Amended) A device comprising:

a first supply node to provide a first voltage, and a second supply node to provide a second supply voltage, wherein the first voltage includes a supply voltage of the device, and wherein the second supply node includes a ground potential;

a plurality of memory segments connected in parallel with each other between the first and second supply [[node]] nodes and a plurality of internal nodes, wherein each of the internal nodes is to receive the voltage from one of the first and second supply [[node]] nodes, wherein each memory segment of the plurality of memory segments includes memory cells, each of the memory cells including a first storage node and a second storage node to store data;

a plurality of switching units, each of the switching units connecting in series with a corresponding memory segment of the memory segments between the first and second supply [[node]] nodes and a corresponding internal node of the internal nodes, wherein within the corresponding memory segment, the corresponding internal node is coupled to the first storage node of each of the memory cells through only one first transistor, and the corresponding internal node is coupled to the second storage node of each of the memory cells through only one second transistor, wherein each of the switching units includes an input node for receiving a select signal to electrically disconnect the corresponding memory segment from the corresponding internal node based on a state of the select signal, and wherein within the corresponding memory segment, each of the memory cells is electrically disconnected from the corresponding internal node when the corresponding memory segment is electrically disconnected from the corresponding internal node; and

a redundant array for replacing at least one memory segment of the plurality of memory segments.

14. (Original) The device of claim 13 further comprising a redundancy controller connected to the switching units for selectively setting the state of the select signal based on a number of programming signals.

15. (Original) The device of claim 14 further comprising a programming unit for generating the programming signals based on a programmed address stored in the programming unit.

16. (Original) The device of claim 13, wherein each of the memory segments includes memory cells arranged memory cell groups, wherein at least one of the memory groups of at least one of the memory segments is defective.

17.-47. (Canceled)

48. (Previously Presented) A device comprising:

- a first supply node to provide a first supply source and a second supply node to provide a second supply source;

- a plurality of memory segments, each of the memory segments including a plurality of memory cells connected to a first internal node and a second internal node, the first internal node to receive the first supply source from the first supply node, the second internal node to receive the second supply source from the second supply node, each of the memory cells including:

 - a first storage node and a second storage node;

 - a latch connected to the first and second storage nodes and connected in between the first internal node and the second internal node;

 - a first access element for accessing the first storage node; and

 - a second access element for accessing the second storage node;

- a plurality of first switching units, each of the first switching units connecting in between the first supply node and a corresponding memory segment of the memory to prevent the corresponding memory segment from receiving the supply source from the first internal node connected to the corresponding memory segment when the corresponding memory segment has a defect; and

a plurality of second switching units, each of the second switching units connecting between the second supply node and a corresponding memory segment of the memory segments to prevent the corresponding memory segment from receiving a supply source from the second internal node connected to the corresponding memory segment when the corresponding memory segment is defective.

49. (Original) The device of claim 48, wherein at least one of the memory segments is defective.

50. (Original) The device of claim 48, wherein at least one of the memory segments has a circuit short between the first and second internal nodes

51. (Original) The device of claim 48, wherein each of the memory segments includes memory cells arranged memory cell groups, wherein at least one of the memory groups of at least one of the memory segments is defective.

52. (Original) The device of claim 48, wherein in each of the memory segments, the plurality of memory cells are arranged in a plurality of rows connected in parallel between one of the first switching unit and one of the second switching units.

53. (Original) The device of claim 48, wherein each of the first switching units includes a transistor having a source and a drain connected between the first supply node and one of the memory segments.

54. (Original) The device of claim 48, wherein each of the second switching units includes a transistor having a source and a drain connected between the second supply node and one of the memory segments.

55. (Original) The device of claim 48, wherein the latch includes:

a first inverter having an input node connected to the first storage node and an output node connected to the second storage node; and

a second inverter having an input node connected to the second storage node and an output node connected to the first storage node.

56. (Original) The device of claim 55, wherein one of the first and second access elements includes a transistor having a source and a drain connected between one of the first and second storage nodes and a bit line.

57. (Original) The device of claim 48, wherein the latch includes:

a first pair of transistors having a common drain connected to the first storage node and a common gate connected to the second storage node; and

a second pair of transistors having a common drain connected to the second storage node and a common gate connected to the first storage node.

58. (Currently Amended) A system comprising:

a processor; and

a memory device connected to the processor, the memory device including:

a supply node for providing a voltage source;

a memory array connected to the supply node via a supply path for receiving the voltage source, the memory array including a plurality of memory segments, each of the memory segments includes memory cells, each of the memory cells including a first storage node and a second storage node to store data, each of the memory segment to receive the supply source via an internal node of a portion of the supply path, wherein the internal node is coupled to the first storage node of each of the memory cells through only one first transistor, and the internal node is coupled to the second storage node of each of the memory cells through only one second transistor;

a supply control circuit connected in the supply path for isolating a corresponding memory segment of the memory segments from the portion of the supply path connected to the corresponding memory segment if the corresponding memory segment is defective; and

a redundant array for replacing the memory segment if the memory segment is defective.

59. (Previously Presented) The system of claim 58, wherein the memory segments connected in parallel with each other, each of the memory segments connecting in series with the supply control circuits and the supply node.

60. (Original) The system of claim 59, wherein at least one of the memory segments is defective.

61. (Previously Presented) The system of claim 59, wherein the supply control circuit includes a plurality of switching units, each of the switching units connecting in series with a corresponding memory segment of the memory segments and the supply node to isolate the corresponding memory segment from the portion of supply path connected to the corresponding memory segment if the corresponding memory segment is defective.

62. (Previously Presented) The system of claim 58 further comprising a redundant array for replacing the corresponding memory segment if the memory segment is defective.

63. (Previously Presented) A method comprising:

determining a condition of a memory device, the memory device including a plurality of memory segments, each of the memory segments connecting to a corresponding internal node of a plurality of internal node to receive a supply source from the corresponding internal node;

isolating a selected memory segment of the memory segments from the corresponding internal node connected to the selected memory segment if the selected memory segment is defective to prevent the selected memory segment from receiving the supply source at the corresponding internal node connected to the selected memory segment; and

replacing the memory segment with a redundant segment if the selected memory segment is defective.

64. (Original) The method of claim 63, wherein determining a condition of a memory device includes detecting for a defect in a memory array of the memory device.

65. (Previously Presented) The method of claim 63, wherein isolating the selected memory segment includes electrically disconnecting the selected memory segment from the corresponding internal node connected to the selected memory segment.

66.-75. (Canceled)

76. (Previously Presented) The device of claim 13, wherein the memory segments include a number of static random access memory (SRAM) cells.

77. (Previously Presented) The system of claim 58, wherein the memory segment includes a number of static random access memory (SRAM) cells.

78. (Previously Presented) The method of claim 63, wherein isolating the selected memory segment includes isolating a number of static random access memory (SRAM) cells of the selected memory segment from the corresponding internal node connected to the selected memory segment.